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ABSTRACT

A research study at Pasadena City College in 1975-76 evaluated a computer based career guidance program, SIGI (System of Interactive Guidance and Information), designed by Educational Testing Service to assist community college students in improving their ability to make career decisions. Students identified as desiring aid in career guidance were randomly assigned to one of two groups: the control group to receive the traditional vocational guidance testing and counseling, and the experimental group to spend an equal amount of time in career exploration using SIGI. Three student and one counselor questionnaire and student records were used to gather data for use in examining results in relationship to twenty-eight specific criteria. Chi square statistical tests were used to determine whether there was significant difference in the suitability of career choice for students in the two groups. Questions regarding appeal of SIGI to males and females, various age groups, ethnic minorities, and occupational and academic majors were also examined as were program costs and effects of reading ability. (Results for each of the twenty-eight criteria are presented and discussed.) Findings strongly indicated that SIGI students were better prepared to make appropriate decisions about their careers than those in the traditional program. Recommendations were that the program be retained and that a follow-up investigation be conducted in two years. (Available separately are the research design--CE 015 037--and report of the pilot study--CE 015 038). (JT)

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PASADENA CITY COLLEGE

SIGI PROJECT

RESEARCH STUDY

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June 1977

CE 015035

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PASADENA CITY COLLEGE

SIGI PROJECT

RESEARCH STUDY

I. BACKGROUND

SIGI, A System of Interactive Guidance and Information, has been designed by a distinguished group of research scientists associated with the Educational Testing Service to assist students in making better career decisions. Pasadena City College was one of six colleges, nationwide, which engaged in a field test of the SIGI program. The basic question has been to determine whether SIGI is more effective in helping students make better decisions than the traditional vocational testing and counseling.

INTRODUCTION

The basic Research Design for the Pasadena City College SIGI Project was developed by the College Counseling Psychologists in September 1974 and submitted to the College SIGI Project Director. The Research Design called for a Pilot Study, which was conducted from March 17, 1975 to December 17, 1975. The complete Research Study covered the period of March 17, 1975 to March 31, 1977.

The Research Study conducted by the Pasadena City College Counseling Psychologists represented only one aspect of a three-fold evaluation of the SIGI Project at Pasadena City College. In addition to this evaluation, other evaluative studies included a review by an outside independent evaluator and the comprehensive evaluation designed and conducted by the SIGI staff of the Educational Testing Service.

The Pasadena City College SIGI Research Study used a classical design including Experimental and Control groups. A discussion of the problems and limitations of such a design was presented in the Pasadena City College SIGI Project Research Design, September 30, 1974.

The Research Study followed the procedures set forth in the Research Design except for an extension of the time schedule and a reduction in the number of students involved. The original plan called for a Pilot Study of 150 students in the Experimental group and 150 students in the Control group during 1974-75. The 1975-76 sample was to have had 250 students in each group. Delays in obtaining the SIGI hardware, developing the software, and getting both operational caused a delay in beginning the Study. During the period of March 17, 1975 to March 31, 1977, over 500 students participated in the Research Study. The final tabulations were limited to the first 250 students in each group who completed all requirements of the Research Design.

PROCEDURE

Students at Pasadena City College were informed about the purposes and availability of the SIGI project by newspaper articles and flyers. Applicants were given additional information about the program and were asked to submit a registration form. Assignment to a

group was on a random basis. Each applicant drew one marker from a box that contained two markers, one labeled Experimental; one labeled Control. Those who drew assignment to the Experimental group made appointments to use SIGI; the Control group began with the testing program.

Following these different treatments, the students in the Experimental group had individual follow-up conferences with one of three assigned SIGI counselors. Those in the Control group had individual follow-up conferences with their own counselors.

COLLECTION AND TREATMENT OF THE DATA

Basic data were collected from questionnaires completed by students and counselors. The following instruments were used:

1. Registration Form - Completed by all students prior to their participation in the project.

2. SIGI Evaluation Questionnaire (SEQ) - Given to the Experimental group only and completed after their exposure to SIGI.

3. Occupational Information Questionnaire (OIQ) - Given to all students and completed following final counseling conference.

4. Counselor Questionnaire (CQ) - Completed by counselors for all students.

5. Student Questionnaires (SQI and SQII) - Completed by all students following the final counseling conference.

Additional information was gathered from student records.

The criteria selected for study were those that could be measured effectively and were related directly to the basic objectives of the project. The Research Study involved all criteria delineated in the SIGI Project Research Design.

Chi Square was the nonparametric statistical technique chosen to test the hypotheses of the differences between the two groups involved. Following standard procedure, differences found between the two groups have been identified as <u>significant</u> when the .05 level of confidence was reached, and <u>very significant</u> when the level of confidence reached the .01 level.

In some cases, the format of the information report differed slightly from that originally reported on the questionnaire. Siegel has noted that if the requirements are not met by the data in the form in which they were originally collected, the researcher must combine adjacent categories so as to increase the expected frequencies in the various cells. It was further noted that adjacent categories which are to be combined must have some common property or mutual identity if interpretation of the outcome of the test after the combining is to be possible. For those criteria where there were changes in terminology or where categories were combined, such changes were noted.

SAMPLE

The Research Study Sample is described in TABLE 1.

TABLE 1

SAMPLE DESCRIPTION FOR THE RESEARCH STUDY

	EXPERIMENTAL		CONTROL		PASADENA CITY COLLEGE
	N	Percentage	N	Percentage	Population Percentage
SEX					
Male	89	36%	98	39%	48%
Female	161	64%	152	61%	52%
Total	250		250		
AGE					
17	19	8%	16	6%	5%
18-23	175	70%	156	63%	50%
24-30	28	11%	37	15%	22%
31 over	28	11%	41	16%	23%
Total	250		250		
ETHNIC					
Black	19	8%	20	8%	15%
Mexican/American	19	8%	21	8%	9%
Oriental	9	3%	15	6%	3%
Other	5	2%	6	3%	2%
White	198	79%	188	75%	71%
Total	250		250		
COLLEGE MAJOR (GOAL)					
Vocational Major	51	20%	39	16%	21%
Academic Major	144	58%	139	55%	37%
Undeclared Major	55	22%	72	29%	42%
Total	250		250		

BASIC QUESTIONS

When participation in the SIGI Research Study was first discussed, several basic questions were raised. The most important of these are listed below and followed by information based upon the findings.

1. Will SIGI, with its obvious mechanical and technical aspects, appeal more to males than females?
   -Of the 500 students who asked to use SIGI and who completed all segments of the Research Study, thirty-seven per cent were male and sixty-three per cent were female.

2. Is reading ability a factor? Will slow readers need more time than fast readers to complete the SIGI program?
   -There was no significant relationship (r=.052) between reading scores and the time spent with SIGI.

3. Will SIGI appeal to all age groups?
   -All age groups were represented among SIGI applicants. Approximately two-thirds of the SIGI applicants in the Research Study were between 18 and 23 years of age. TABLE 2 shows the SIGI applicants and college population age breakdowns.

TABLE 2

Age	SIGI Applicants	College Population
17	7%	5%
18-23	66%	50%
24-30	13%	22%
Over 31	14%	23%

4. Will SIGI appeal to ethnic minorities?

   -Ethnic breakdown for SIGI applicants and the college population is shown in TABLE 3.

TABLE 3

Ethnic Group	SIGI Applicants	College Population
Afro-American; Black	8%	15%
Mexican-American, Chicano, or Spanish Surname	8%	9%
Oriental or Asian-American	5%	3%
Other	2%	2%
White	77%	71%

5. Will SIGI appeal to students in two-year occupational curricula as well as to those who are academic majors and are planning to transfer to four-year colleges?

   -Stated initial majors of SIGI applicants were classified into three groups. TABLE 4 shows the distribution.

TABLE 4

College Major (Goal)	SIGI Applicants	College Population
Vocational Major	18%	21%
Academic Major	57%	37%
Undeclared Major	25%	42%

6. What are the costs of SIGI?

-There are many ways of examining the costs and benefits of SIGI. Costs can be described under two categories: (A) Basic costs of the Research Study - Direct, Indirect, and Constraints and (B) Projected Annual Costs (1977-1979).

(A) BASIC COSTS OF THE RESEARCH STUDY

Direct Costs

Direct Costs were computed as follows:

(1) Equipment and Set-Up Costs

--PDP-11 Computer	- $64,825
--Delta Data CRT's 2 @ $3,170	- $6,340
--Texas Instrument Printer	- $1,450
--Okidate Printer	- $1,725
	$74,340
Tax	- $4,460
	$78,800

(A) Equipment was depreciated over a five year period.

Per Year Cost - $15,760
Per Month Cost - $1,313

(B) Equipment and Set-Up Costs for the 25 month Research Study period - $32,833.

(2) Personnel Costs

(A) Approximately 75% of the Student Personnel Assistant's time was devoted to the SIGI Research Study. Total period of service was 31 months (September 1974 to March 1977). Period prior to March 1975 was used in setting up for the use of SIGI on campus.

Total cost for the Research Study (31 months) - $29,190.

(B) Additional clerical expense during the Research Study period was approximately - $500.

(3) Additional Costs

(A)

Paper and Supplies	- $186
Maintenance of SIGI Equipment	- $3,972
Rental Costs	- $2,040
Annual Basis	- $6,198

(B) Total Additional Costs for the 25 Month Research Study Period - $12,912

(4) Summary: Direct Costs of the Research Study (25 Months)

(A)

Equipment and Set-Up Costs	- $32,833
Personnel Costs	- $29,690
Additional Costs	- $12,912
	$75,435

Indirect Costs

In addition to the costs directly attributed to SIGI, there were many other personnel and site costs related to the SIGI project.

The Pasadena City College Dean of Counseling served as the Project Director and he spent a great deal of time developing and administering the SIGI Project. Much time also was given by the College Director of Computer Services. To a lesser extent, the College Psychologists, counselors, administrative personnel, and others have contributed services.

Basic costs included regular housing expenses for the PDP-11 Computer in the College Computer Center and the SIGI terminals in the College Career Center.

Constraints of the Research Study

The Research Study involved a formal research design with Experimental and Control groups of students. Volunteer students were randomly assigned to a group. In addition to the basic experience (SIGI or the traditional vocational battery), all participants were required to complete several written forms and to have a final interview with a counselor. Other information included imput from counselors and additional data about the participants.

The College Student Personnel Services Assistant was responsible for the daily operation of SIGI and the SIGI Research Study. The Assistant spent considerable time and effort in meeting the rigid demands of the Research Study. She was required to distribute, collect, and tabulate all forms and questionnaires and to maintain all necessary records. Concerted efforts were made to have entering students in both groups complete all requirements of the Research Study. Students in the Control group were permitted to use SIGI after completing their part of the Study.

The very nature of the Research Study itself greatly limited the number of students who were able to use SIGI within the time period. This was part of the price paid to conduct a formal research study.

(B) PROJECTED ANNUAL COSTS (1977-1979)

Projected costs are based on the following information:

(1) Annual Costs:

Equipment Costs	$15,760
Personnel Costs	$1,800
Additional Costs	$6,198
	$23,758

(2) Basic Projected System

(A) Two Terminals

(B) Operating 8:00 a.m. to 9:00 p.m. (13 hours) daily for 232 days per year (days students are in attendance). Total operating hours - 6,032 per year.

(3) Operating Costs Per Hour Per Terminal

$23,758 ÷ 6,032 = $3.94

(4) The $3.94 compares favorably with the Educational Testing Service estimate for a four terminal, 10 hour a day, 250 day system which would cost $3.59 per hour.

II. FINDINGS

All of the original criteria chosen for inclusion in the SIGI Research Design were studied. The basic findings are listed below:

CRITERION

1. Success in career objective as measured by completion of the semester in which the student participated in the study.

Findings: (A) Completion Distribution*

	Withdrew	Completed
Control	8	233
Experimental	7	243

(B) Statistical Analysis

X^2 - 0.10
- Not Significant

2. Success in college as measured by g.p.a. for the semester in which the student participated in the study.

Low.....2.4 Middle.....2.5 - 3.4 High.....3.5+

Findings: (A) Grade Distribution

	Low	Middle	High
Control	47	110	76
Experimental	40	120	83

(B) Statistical Analysis

X^2 - 1.09
- Not Significant

*Note: While 500 students participated in the study, not all information for each student was available in each area studied.

3. Degree of satisfaction with current educational plans as determined by students' self ratings. Measured by response to item #3 - SQI and SQII, "How satisfied are you with your current educational plans? Very Satisfied___Satisfied___Not Satisfied___"

Findings: (A) Student Ratings

	Not Satisfied	Satisfied	Very Satisfied
Control	50	147	50
Experimental	26	125	98

(B) Statistical Analysis

X^2 - 24.97
- Significant at .01 level

4. Degree of confidence in succeeding in current educational plans as determined by students' self ratings. Measured by response to item #4 - SQI and SQII, "How confident are you of succeeding in current educational plans? Very Confident___Confident___Not Confident ___"

Findings: (A) Student Ratings

	Not Confident	Confident	Very Confident
Control	35	139	66
Experimental	22	115	113

(B) Statistical Analysis

X^2 - 17.42
- Significant at .01 level

5. Degree of satisfaction with current vocational plans as determined by students' self ratings. Measured by response to item #5 - SQI and SQII, "How satisfied are you with your current vocational plans? Very Satisfied ___Satisfied___Not Satisfied___"

Findings: (A) Student Ratings

	Not Satisfied	Satisfied	Very Satisfied
Control	82	115	41
Experimental	45	119	75

(B) Statistical Analysis

X^2 - 20.79
- Significant at .01 level

6. Degree of confidence in succeeding in vocational plans as determined by students' self ratings. Measured by response to item #6 - SQI and SQII, "How confident are you of succeeding in current vocational plans? Very Confident___Confident___Not Confident___"

Findings: (A) Student Ratings

	Not Confident	Confident	Very Confident
Control	70	113	46
Experimental	30	135	73

(B) Statistical Analysis

X^2 - 24.00
- Significant at .01 level

7. Students' expressed need for help with educational planning. Measured by response to item #7 - SQI and SQII, "What is your current need for help with educational planning?"

Findings: (A) Student Ratings

	No Help Needed	Help Needed	Much Help Needed
Control	33	160	53
Experimental	134	101	13

Note: Category titles have been changed.

(B) Statistical Analysis

X^2 - 98.68
- Significant at .01 level

8. Students' expressed need for help with career planning. Measured by response to item #8 - SQI and SQII, "What is your current need for help with vocational planning?"

Findings: (A) Student Ratings

	No Help Needed	Help Needed	Much Help Needed
Control	38	126	83
Experimental	123	94	24

Note: Category titles have been changed.

(B) Statistical Analysis

X^2 - 81.90
- Significant at .01 level

9. Extent of students' knowledge of college course requirements as determined by self ratings. Measured by response to item #9 - SQI and SQII, "Indicate the extent of your knowledge of college course requirements."

Findings: (A) Student Ratings

	Very Limited Knowledge	Some Knowledge	Adequate Knowledge
Control	43	128	77
Experimental	13	90	146

(B) Statistical Analysis

X^2 - 44.15
- Significant at .01 level

10. Extent of students' knowledge of entry level requirements for their chosen career as determined by self ratings. Measured by response to item #10 - SQI and SQII, "Indicate extent of your knowledge of entry level requirements."

Findings: (A) Student Ratings

	Very Limited Knowledge	Some Knowledge	Adequate Knowledge
Control	103	110	33
Experimental	56	104	87

(B) Statistical Analysis

X^2 - 38.45
- Significant at .01 level

11. Probability of success in students' educational programs as determined by counselors' ratings. Measured by response to item #2 - CQ, "Rate the probability of the student succeeding in his chosen educational program."

Findings: (A) Counselors' Ratings

	Little Probability	Reasonable Probability	High Probability
Control	13	128	97
Experimental	4	121	119

(B) Statistical Analysis

χ^2 - 7.08
- Significant at .05 level

12. Probability of students' attaining stated vocational goals as determined by counselors' ratings. Measured by response to item #3 - CQ, "Rate the probability of the student attaining his chosen vocational goal."

Findings: (A) Counselors' Ratings

	Little Probability	Reasonable Probability	High Probability
Control	13	135	83
Experimental	7	100	136

(B) Statistical Analysis

χ^2 - 19.69
- Significant at .01 level

13. Extent of students' information about chosen occupation as measured by scores on the Occupational Information Questionnaire. Measured by total raw scores on OIQ. Maximum score was 45. Scores ranged from 1-43. Median scores were as follows: Control Group -24, Experimental Group -29. Scores were assigned to the following categories: Little Information - 0-15, Adequate Information - 16-30, More Than Adequate Information - 31-42. A total of 62 students (17-Experimental and 45-Control) did not complete the OIQ. This may have been due to a lack of encouragement to do so at the time of the final conference or to the possibility that the students did not have an occupation that they were seriously considering.

Findings: (A) Student Scores

	Little Information	Adequate Information	More Than Adequate Information
Control	34	118	53
Experimental	17	115	101

(B) Statistical Analysis

X^2 - 18.76
- Significant at .01 level

14. Value of post-SIGI and post-vocational test interpretation counseling sessions as measured by student ratings. Information obtained from item #11 - SQI and SQII, "All students have had individual conferences with their counselors. At these conferences your SIGI (or Vocational testing) materials were reviewed and career plans discussed. "How valuable were these conferences to you?"

Findings: (A) Student Ratings

	Little Value	Valuable	Much Value
Control	21	124	104
Experimental	25	124	97

(B) Statistical Analysis

X^2 - 0.56
- Not Significant

15. SIGI users only - Value of the SIGI experience. Measured by responses to SEQ items #14 and #16.

Item #14 - "Circle the grade that you would give SIGI on each of the following."

Findings: (A) Student ratings - A composite score was obtained and assigned to one of three categories.

	No Value	Valuable	Much Value
Male	31	111	510
Female	31	178	1105

(B) Statistical Analysis

X^2 - 13.30
- Significant at .01 level

Findings: The percentages of responses for each subsection of item #14 were computed and are listed on the next page.

	Percentages					
	A	B	C	D	E	F
- General interest ----------	54	40	5	1		
-Clarity of directions ----------	63	31	6			
- Helping you to become more aware of your values ----------	67	25	8			
- Helping you to understand that values are related to career decisions----------	61	30	8	1		
- Helping you to find out which occupations fit your values-----	50	31	14	3	1	1
- Helping you to obtain information about occupations ----------	43	34	19	3	1	
- Helping you to plan a program that is appropriate for an occupation that you are considering -------	22	37	35	4	1	1
- Helping you to learn how to make career decisions ----------	31	41	21	6	1	

Item #16 - "In summary, was SIGI helpful to you?"

Findings: (A) Student Ratings

	None or Little Help	Helpful	Very Helpful
Male	15	56	18
Female	9	103	49

(B) Statistical Analysis

x^2 - 9.89
- Significant at .01 level

Findings: The percentage of responses for each subsection of item #16 were computed and are listed below:

Responses	Percentages
- Very much so. I was completely satisfied----------	27
- Yes, it was very helpful----------	64
- It was not very helpful----------	8
- I would have received more help if I had just talked to a counselor without using SIGI----------	1
- No, SIGI was a waste of time---------	0

16. Realistic nature of change in students' career objectives. Measured by counselor's ratings. (Only those students who change career objectives.) Measured by responses to item #4 - CQ.

Findings: (A) Counselors' Ratings of Students

	More Realistic	No Difference
Control	71	10
Experimental	129	3

Note: There were no ratings in the "Less Realistic" category.

(B) Statistical Analysis

X^2 - 7.39
- Significant at .01 level

17. Degree of Students' knowledge of how to make career decisions as determined by counselors' ratings. Measured by responses to item #5 - CQ.

Findings: (A) Counselors' Ratings of Students

(A - highest rating, F - lowest rating)

	F-D	C	B	A
Control	26	79	110	33
Experimental	9	26	97	113

Note: Categories were combined.

(B) Statistical Analysis

X^2 - 79.60
- Significant at .01 level

18. Degree of students' information about specific occupations as determined by counselors' ratings. Measured by responses to item #6 - CQ.

Findings: (A) Counselors' Ratings of Students

(A - highest rating, F - lowest rating)

	F-D	C	B	A
Control	29	96	90	32
Experimental	10	31	76	130

Note: Categories were combined.

(B) Statistical Analysis

X^2 - 102.98
- Significant at .01 level

19. Degree of students' knowledge of course requirements for specific occupations as determined by counselors' ratings. Measured by responses to item #7 - CQ.

Findings: (A) Counselors' Ratings of Students

(A - highest rating, F - lowest rating)

	F-D	C	B	A
Control	20	84	95	42
Experimental	5	39	65	135

Note: Categories were combined.

(B) Statistical Analysis

X^2 - 79.94
- Significant at .01 level

20. Degree of students' knowledge of desired outcomes from the counseling conference as determined by counselors' ratings. Measured by responses to item #8 - CQ.

Findings: (A) Counselors' Ratings of Students

(A - highest rating, F - lowest rating)

	F-D	C	B	A
Control	17	37	120	71
Experimental	5	22	51	163

Note: Categories were combined.

(B) Statistical Analysis

X^2 - 74.33
- Significant at .01 level

21. Overall value of the counseling conference as determined by counselors' ratings. Measured by responses to item #9 - CQ.

Findings: (A) Counselors' Ratings of Students

(A - highest rating, F - lowest rating)

	F-D	C	B	A
Control	10	33	133	69
Experimental	2	11	64	169

Note: Categories were combined.

(B) Statistical Analysis

X^2 - 82.51
- Significant at .01 level

22. Degree of change in students' sureness in choice of college programs and occupations as measured by self ratings. Measured by responses to item #12 - SQI and SQII. Category assignments were determined by change in category ratings from "...before beginning the program" to "...after having completed the program."

Findings: (A) Student Ratings

Note: Fifty ratings of more than one positive category change were placed with the "More Sure" category.

	Less Sure	No Change	More Sure
Control	19	135	96
Experimental	10	87	152

Note: Category titles have been changed.

(B) Statistical Analysis

X^2 - 25.84
- Significant at .01 level

23. Degree of change in students' knowledge of factors which are important in making career decisions as measured by self ratings. Measured by responses to item #13 - SQI and SQII. Category assignments were determined by change in category ratings from "... before beginning the program" to " ...after having completed the program."

Findings: (A) Student Ratings

Note: Ninety-two ratings of more than one positive category change were placed in the "More Knowledge" category. Five ratings in the "Less Knowledge" category were placed with the "No Change" category.

	Less Knowledge or No Change	More Knowledge
Control	109	136
Experimental	54	196

Note: Category titles have been changed.

(B) Statistical Analysis

χ^2 - 29.30

- Significant at .01 level

24. Degree of change in students' knowledge of the college programs and occupations of their choice as measured by self ratings. Measured by responses to item #14 - SQI and SQII. Category assignments were determined by change in category ratings from "...before beginning the program" to "...after having completed the program."

Findings: (A) Student Ratings

Note: Fifty-three ratings of more than one positive category change were placed in the "More Knowledge" category. Eleven ratings in the "Less Knowledge" category were placed with the "No Change" category.

	Less Knowledge or No Change	More Knowledge
Control	143	97
Experimental	91	154

Note: Category titles have been changed.

(B) Statistical Analysis

X^2 - 24.44
- Significant at .01 level

25. Amount of time devoted to post-SIGI or post-vocational test counseling sessions. Note: Original categories were modified to reflect actual distribution.

Findings: (A) Breakdown of Time

	Under One Hour	One Hour or More
Control	143	107
Experimental	163	87

(B) Statistical Analysis

X^2 - 3.36
- Not Significant

26. Reading Ability. Measured by raw score on the Reading Section of the Wide Range Achievement test. SIGI users only.

Findings: (A) Five of the 250 students had reading grade placement scores below 8.3. The median grade placement was 15.0. One hundred and five students had reading grade placement scores above 16.8.

(B) Time spent on SIGI ranged from a low of 120 minutes to a high of 585 minutes. Median time spent was 255 minutes. Seventy-six students spent 5 hours or more on SIGI.

(C) The WRAT scores were correlated with time spent on SIGI. The positive correlation was .052. (Not Significant)

27. Reaction to the SIGI experience. The two hundred and fifty students in the Experimental group were asked several questions relating to their experience with SIGI. (A summary of the results from the SIGI Evaluation Questionnaire (SEQ) follows.)

Number of Responses*	
	1. What is the primary reason you chose to use SIGI to assist you with your vocational plans?
103	A. I was curious regarding this program for career guidance and wanted to learn more about it____
11	B. I had decided to change my career plans____
129	C. I was undecided in regard to my career plans and needed more information____
22	D. I was considering changing my career plans____
30	E. I felt quite confident about my career plans but still had a few doubts or questions____
30	F. I wanted to confirm my career plans____
	2. Did you need assistance while working with the SIGI computer terminal?
192	A. Only for initial instructions____
50	B. Yes, twice____
13	C. Yes, three times____
8	D. Yes, four times or more____
9	E. No assistance needed____

*Note: Totals do not always equal 250

Number of Responses	
	3. Did you have all the information you needed to use SIGI effectively?
209	A. Yes____
29	B. No, but the needed information was supplied by the counselor____
17	C. No, but the needed information was easily obtained ____
13	D. No, but I got along all right without it____
4	E. Because I didn't have the information I needed, the computer was not very helpful to me____
	4. Tentative occupational choice prior to use of SIGI_____
	5. When you first came to SIGI, how confident of your occupational plans were you?
55	A. I came to SIGI not knowing what I wanted to do____
73	B. I came to SIGI having several alternatives____
113	C. I came to SIGI with questions or doubts about my occupational plans____
32	D. I came to SIGI with confidence in my occupational plans____
	6. Tentative occupational choice now _____
	7. Now, how confident of your plans are you? (Check as many as appropriate)
48	A. I am still uncertain____
161	B. I have a much better idea now____
33	C. SIGI helped me to choose one____
82	D. SIGI helped confirm the choice I had already made____
70	E. SIGI suggested other things which I am considering____

Number of Responses	
	8. How was SIGI helpful? (Check all that apply)
212	A. Assisted me to think about my interests____
158	B. Assisted me to think about my abilities____
243	C. Assisted me to think about my values____
124	D. Assisted me in making career plans____
194	E. Assisted me to obtain more information about occupations____
106	F. Assisted me to obtain more information about college programs____
133	G. Assisted me in teaching me how to make career decisions____
3	H. It was not helpful____

9. What was the most useful section of SIGI for you?

Values 175 Compare 44 Planning 33

Locate 26 Prediction 22 Strategy 21

10. Is there anything SIGI didn't cover that you would like it to cover? What?

(See Appendix)

11. Did you have any trouble locating an occupation in which you are interested?

46 Yes____
203 No ____

12. Were there any occupations missing from SIGI in which you were interested?

77 Yes____ If yes, list occupations

(See Appendix)

173 No ____

Number of Responses

13. Is there any area you would like to have covered more fully?

76 Yes____
169 No ____

14. Circle the grade that you would give SIGI on each of the following: (A - very high, F - very low)

		Number of Responses					
		A	B	C	D	E	F
A.	General Interest	132	99	14	2	0	0
B.	Clarity of Directions	158	79	15	0	0	1
C.	Helping you to become more aware of your values	166	63	20	0	1	0
D.	Helping you to understand that values are related to career decisions	152	75	20	3	1	0
E.	Helping you to find out which occupations fit your values	125	78	35	9	2	2
F.	Helping you to obtain information about occupations	106	83	45	7	2	0
G.	Helping you to plan a program that is appropriate for an occupation you are considering	56	92	87	10	4	2
H.	Helping you to learn how to make career decisions	78	103	53	14	2	0

15. Did SIGI help you to make better use of your counselor's time? (Check as appropriate)

203 A. After using SIGI, I felt the time I spent with the counselor was of greater value than if I had not used SIGI____

Number of Responses	
33	B. After using SIGI, I felt there was no need to to see a counselor____
39	C. After using SIGI, I felt the need to see a counselor more than ever____

16. In summary, was SIGI helpful to you?

67	A. Very much so. I was completely satisfied____
159	B. Yes, it was very helpful____
21	C. It was not very helpful____
3	D. I would have received more help if I had just talked to a counselor without using SIGI____
0	E. No, SIGI was a waste of time____

17. Do you expect to return to Pasadena City College next semester?

209	Yes____
40	No____

18. Would you like to use SIGI again?

144	Yes____
89	No____
17	Possibly____

28. Student Background Information - Presented on TABLE 1.

SUMMARY OF VERY SIGNIFICANT FINDINGS (.01 LEVEL)

CRITERION	When compared to students in the Control group, students in the Experimental group....
3.	expressed a higher degree of satisfaction with current educational plans.
4.	expressed a higher degree of confidence in succeeding in current educational plans.
5.	expressed a higher degree of satisfaction with current vocational plans.
6.	expressed a higher degree of confidence in succeeding in current vocational plans.
7.	expressed less need for help with educational planning.
8.	expressed less need for help with career planning.
9.	expressed a higher degree of knowledge of college course requirements.
10.	expressed more knowledge of entry level requirements for their chosen career.
12.	received more favorable ratings from counselors about the probability of attaining their stated vocational goal.
13.	had more information about their chosen occupations.
15.	Within the Experimental group, female students expressed a higher value rating for SIGI than did the male students.
16.	made more realistic changes in career objectives.
17.	received higher ratings from counselors about their ability to make career decisions.
18.	received higher ratings from counselors about the degree of their information about specific occupations.
20.	received higher ratings from counselors about the degree of their knowledge of desired outcomes from the counseling conferences.
21.	received higher ratings from counselors about the overall value of the counseling conferences.

CRITERION

22. expressed more sureness in their choice of college programs and occupations.

23. expressed more knowledge of factors which are important in making career decisons.

24. expressed more knowledge of the occupations and college programs of their choice.

SUMMARY OF SIGNIFICANT FINDINGS (.05 LEVEL)

CRITERION — When compared to students in the Control group, students in the Experimental group....

11. received more favorable ratings from counselors about the probability of success in their educational plans.

SUMMARY OF NONSIGNIFICANT FINDINGS

CRITERION — There was no statistically significant difference between the Control and Experimental groups in....

1. their completion of the semester in which they participated in the study.

2. their success in college as measured by grade point average for the semester in which they participated in the study.

14. the value of the (post-SIGI or post-Vocational testing) follow-up counseling sessions, as judged by the students.

25. the amount of time spent in the follow-up counseling sessions.

III. DISCUSSION OF THE FINDINGS

CRITERION	DISCUSSION
1.	No difference was found between the Experimental and Control groups in success in career objective as measured by completion of the semester in which the student participated in the project. Students may withdraw from college for many reasons. Furthermore, if students discover they are taking classes that are inappropriate to their career objectives, they may withdraw in preparation for moving ahead in a new direction. In any event, one semester in college is too short a time to measure success in pursuit of a career objective. Attention should be given to completion of the education or training necessary for entry into the chosen occupation. This should be pursued in follow-up studies.
2.	No difference was found between the two groups in terms of success in college as measured by grade point average for the semester in which the student participated in the study. The comment above on Criterion 1 also applies to Criterion 2.
3.	Students who used SIGI indicated they were more satisfied with their educational plans than the students who received the traditional testing and

CRITERION DISCUSSION

counseling. The difference was very significant, beyond the .01 level. In this instance, and in all of the other significant findings reported, the Hawthorne Effect should not be overlooked. All applicants knew they were participants in a study to evaluate the effectiveness of SIGI. Those who used SIGI knew they were in the Experimental group. Likewise, those who received the traditional testing knew they were in the Control group. It has been found that students who know they are in experimental situations may perform better because of expectations and other motivational factors. Still, the obvious must not be overlooked: The students who used SIGI did indicate they were more satisfied with their educational plans than did the students who had the traditional career testing and counseling.

4. Students may be satisfied with their educational plans but are they also more confident that they can complete the educational program successfully? The students who used SIGI expressed greater confidence in being successful in their educational plans than those who received the vocational testing and counseling. The difference between the two groups was at a very significant level.

CRITERION	DISCUSSION
5.	It is possible for students to be satisfied and confident of success with educational plans but to have reservations about the satisfaction and success they will have in the occupation itself. The students who used SIGI expressed greater satisfaction with their current vocational plans than did those in the Control group. The difference between the two groups was very significant and favored the Experimental group.
6.	The students using SIGI were also more confident of succeeding in their chosen vocations. The difference between the Experimental and Control groups was very significant.
7.	Is the experience with SIGI or that of the traditional vocational testing and counseling more complete in helping students with their educational planning? In this Research Study, the students who had the traditional testing and counseling expressed a greater need for additional assistance in educational planning. The difference between the two groups was very significant.
8.	The students exposed to SIGI also expressed less need for assistance with career planning. The difference between the Experimental and Control groups was very significant.

CRITERION	DISCUSSION
9.	The students who used SIGI rated themselves as having more knowledge of college course requirements than did those in the Control group. The difference was at a very significant level. While printed course requirement sheets are available to all students, the SIGI users seem to believe that the material obtained from the SIGI experience provided them with more knowledge than that provided the non-SIGI students.
10.	Students in the Experimental group rated themselves as having more knowledge of entry level requirements for their chosen careers than did the students in the Control group. The difference was very significant.
11.	Do counselors see the students probability of success in their educational and vocational plans in the same way as the students see themselves? In this Research Study, counselors rated the probability of the students succeeding in their chosen educational programs significantly higher for those who had the SIGI experience than for those who had the traditional vocational testing and counseling. While the statistical difference between the groups was significant, this was the only criterion significant at the .05 level.

CRITERION

DISCUSSION

12. Counselors may see students as obtaining success in their educational plans, but do they see the students as being successful also in their chosen vocations? In the Research Study, counselors rated the SIGI students as having a very significantly higher probability of attaining their vocational goals as compared with the students who completed the traditional program.

13. Did the students who used SIGI have more information about their chosen occupations than those who received the traditional career guidance counseling?

An Occupational Information Questionnaire was developed to answer this question. Using the objective scores from this information questionnaire as the criterion, the SIGI students scored higher at a very significant level. This is one criterion where the Hawthorne Effect is probably not operative. The score on the questionnaire was not a matter of performance or subjective rating, but rather of the amount of occupational information the student had accumulated.

The printout capability of SIGI is one of its valuable features. When SIGI users obtain information about occupations which they would like to keep,

CRITERION DISCUSSION

the information may be duplicated on paper for their personal use.

The findings of the Research Study suggest that greater use might be made of printed occupational information for distribution to students.

14. Does SIGI or vocational testing provide the best foundation for career guidance counseling? There was no difference between SIGI users and the students who took the traditional vocational testing in terms of the value they placed on the conferences with their counselors to review career information and to discuss career plans. It should be noted that 42 per cent of the students in the Control group and 39 per cent in the Experimental group rated these conferences as having "Much Value" for them. Approximately, only one in ten students in each group felt the follow-up conferences were of "Little Value."

15. Criterion #15 was not used to compare the students in the two groups. It pertained to SIGI users only. The question (SEQ - #16) was, "In summary, was SIGI helpful to you?" The responses of the male SIGI users were compared to the responses of the female SIGI users. The females rated SIGI as of greater value than did the male users, the difference being statistically very

CRITERION	DISCUSSION
	significant. Female users of SIGI also gave an overall rating of the value of SIGI that was very significantly higher than the rating of the male users.
16.	Approximately 53 per cent of the students in the Experimental group and 32 per cent in the Control group changed their career objective following their vocational testing or experience with SIGI. Counselors were of the opinion that better than 94 per cent of these students made decidedly more realistic choices. In no case did a counselor believe the student's new choice was less realistic. The statistical difference favored the students in the Experimental group as making more realistic changes than did the students in the Control group.
17.	The authors of SIGI have claimed its major purpose is to assist students in making better career decisions. In this Research Study the counselors saw very significant differences in favor of the SIGI students in their knowledge of how to make career decisions.

CRITERION	DISCUSSION
18.	In Criterion #13, it was found that SIGI users actually had more information about their chosen occupations than did those in the Control group who took the traditional vocational testing. When the counselors were asked their subjective opinions of the counselees' information about specific occupations, the results were the same. There was a very significant difference between the two groups in the counselors' ratings of students' information about specific occupations. The very significant difference favored the students in the Experimental group.
19.	Counselors were asked to rate the students in the two groups in terms of their knowledge of course requirements for specific occupations. Here again, counselors saw a higher degree of knowledge on the part of the SIGI students. The difference was very significant.
20.	After the students took the vocational tests or used SIGI, they had follow-up conferences with counselors for the purposes of interpretation, discussion, and planning. One question was whether the students' experience with SIGI would clarify their expectations of the counseling conference. According to the counselors' ratings, the students who had used SIGI had a

CRITERION DISCUSSION

greater knowledge of the desired outcomes from the counseling conference than did the students who had not used SIGI. The difference between the two groups was very significant.

21. There was also the question of whether SIGI would prepare students to make better use of the time in their conferences with counselors. According to the counselors' ratings, this was the case. The counselors believed that the overall value of the counseling conference was greater for the students who had the SIGI experience that it was for the students who had the traditional program. The difference between the two groups was very significant.

22. After the students took the vocational tests or interacted with SIGI, they were asked whether their experiences had made them more sure in their choices of college programs and occupations. Approximately 38 per cent of the Control group and 61 per cent of the Experimental group indicated that they were more sure of their choices following the treatments. Less than 6 per cent of all the students felt that they were less sure of their choices. The statistically significant difference favored the SIGI students as having a greater degree of sureness.

CRITERION	DISCUSSION
23.	The students in both groups were asked if their experiences gave them more knowledge of factors which are important to consider in making career decisions. The findings showed the SIGI students to have a more positive degree of change than did the non-SIGI students. The difference between the two groups was very significant and indicated that the SIGI experience seemed to increase students' knowledge of those factors which are important in making career decisions.
24.	Prior topics have included a discussion of the students' actual information about their chosen occupation, and student and counselor ratings of students' knowledge of course and occupational requirements. Finally, the students were asked whether their experiences did in fact provide them with more knowledge in these areas. Forty per cent in the Control group and 63 per cent in the Experimental group indicated that they had more knowledge of occuaptions and college programs as a consequence of their career guidance experiences. The statistical difference between the two groups was very significant and favored the Experimental group.

CRITERION

DISCUSSION

25. Some have asked whether SIGI reduces the time counselors spend in career counseling with students. The Research Study indicated that there was no statistically significant difference in time spent in follow-up counseling between students who had the SIGI experience and those students who had the traditional experience.

26. A few educators who have examined the SIGI program have questioned whether reading ability would influence the time students would spend with the SIGI terminal. Do poor readers require an inordinate amount of terminal time?

All students in the Experimental group were given the reading section of the Wide Range Achievement Test. Their reading scores were correlated with the time they spent on the terminal. The correlation of .052 showed almost no relationship between reading ability and time spent with SIGI.

27. All students in the Experimental group were asked to complete the SIGI Evaluation Questionnaire (SEQ). A tabulation of these responses was included in the FINDINGS section of this report. Although the tabulation is self-explanatory, brief comments on selected questions follow.

CRITERION

DISCUSSION

SEQ Item #2 - Approximately, 71 per cent of the responses indicated a need for assistance while working with SIGI only for the initial instructions. Eighteen per cent of the responses showed a need for assistance two times and 8 per cent needed help three or more times. It would seem that very few students need assistance following the initial instructions.

SEQ Item #8 - Students were asked in what ways SIGI was helpful to them. The three highest rated responses were: (1) Assisted me to think about my values, (2) Assisted me to think about my interests, and (3) Assisted me to obtain more information about occupations.

SEQ Item #9 - This item asked for an indication of the most useful section of SIGI. The Values section rated much higher than any of the other listed sections. The responses to items #8 and #9 seemed to show that the Values section was the most important segment of the SIGI program for the students in the Research Study.

SEQ Item #14 - Students who used SIGI gave it high ratings in all areas but especially in General Interest, Clarity of Directions, and Understanding How Values are Related to Career Decisions. The lowest rating was given in the area of Planning an Appropriate Program for Occupations under Consideration.

CRITERION

DISCUSSION

SEQ Item #15 - Seventy-four per cent of the responses from students in the Experimental group indicated that they felt the time spent with a counselor was of more value because of their experience with SIGI.

SEQ Item #16 - Ninety per cent of the students who used SIGI were COMPLETELY SATISFIED or felt it was VERY HELPFUL. Eight per cent of the students rated SIGI as NOT VERY HELPFUL. It would seem that the majority of Pasadena City College students who used SIGI had a very positive reaction to the experience.

IV. CONCLUSIONS AND RECOMMENDATIONS

The purpose of the Research Study was to investigate the effectiveness and value of SIGI at Pasadena City College. The findings in the Study strongly indicated that the students who completed the SIGI experience were better prepared to make appropriate decisions about their careers than were the students who had the more traditional vocational testing and counseling program. While the effect of being part of a recognized experimental study is not known, there is always the possibility that the findings were influenced by this fact. Nevertheless, the overall findings supported the effectiveness and value of the SIGI program.

In any investigation into career decisions, the question of time must be considered. It is impossible to judge the true effectiveness and value of SIGI in a limited period of time. Only as the years pass will the persons who have used SIGI be able to look back and pass judgment on whether SIGI was useful in helping them make wise career decisions.

There are two basic recommendations:

(1) The SIGI program be retained at Pasadena City College.

(2) If possible, a follow-up investigation be conducted with those Research Study students who used the SIGI program. This investigation to be conducted approximately two years after the experience with SIGI.

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4. "SIGI Research Design," Pasadena City College, John J. Risser and John E. Tulley, September 30, 1974.

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APPENDICES

A. REGISTRATION FORM

B. SIGI EVALUATION QUESTIONNAIRE (SEQ)

C. OCCUPATIONAL INFORMATION QUESTIONNAIRE (OIQ)

D. COUNSELOR QUESTIONNAIRE (CQ)

E. STUDENT QUESTIONNAIRE (SQI)

F. STUDENT QUESTIONNAIRE (SQII) VOCATIONAL EXPLORATION PROGRAM

G. SEQ - ITEM #10

H. SEQ - ITEM #12

PASADENA CITY COLLEGE
1570 EAST COLORADO BOULEVARD
PASADENA, CALIFORNIA 91106

E. F. Neumann, Dean, Counseling Services
(213) 578-7257 or (213) 578-7287

SYSTEM OF INTERACTIVE GUIDANCE AND INFORMATION

A JOINT EXPERIMENTAL PROJECT OF
Educational Testing Service
California Community Colleges Chancellor's Office
California State Department of Education
Pasadena City College

REGISTRATION FORM

1. Name _____ Date _____
   Last First Middle

   Permanent Address _____
   Number Street City Zip

   Telephone _____ Age: 17 or under ___ 18-23 ___ 24-30 ___ 31 or over ___

   Male ___ Female ___ Social Security Number ___ __ ____ Birthdate _____

   Counseling Team _____

2. Ethnic Background

   Afro-American (Black) ___ Mexican-American, Chicano, or Spanish Surname _____

   Oriental or Asian-American ___ White ___ Other _____

3. Present Career Choice: _____

   a. How much information do you have about this career?
      Extensive ___ Considerable ___ Little ___ Very Little ___

   b. Do you want more information about this career? Yes__ No ___

   c. How confident are you of your choice? Very confident ___ Confident ___
      Some doubts ___ Very undecided ___

   d. Will you be able to obtain from Pasadena City College the preparation you need for direct employment in your chosen career? Yes - No__ Don't know__

   e. Do you plan to transfer to a four year college? Yes ___ No ___ Undecided __

   f. What are your expectations from participation in this project?

      _____

      _____

      _____

   g. Are you currently enrolled at Pasadena City College? Yes ___ No ___

PASADENA CITY COLLEGE

SIGI EVALUATION QUESTIONNAIRE (SEQ)

Name _____
Last First M.I.

Social Security Number _ _ _ _ _ _ _ _ _ _ _

Time On Computer

Time In	Time Out	Date

1. What is the primary reason you chose to use SIGI to assist you with your vocational plans?

   A. I was curious regarding this program for career guidance and wanted to learn more about it ____

   B. I had decided to change my career plans ____

   C. I was undecided in regard to my career plans and needed more information ____

   D. I was considering changing my career plans ____

   E. I felt quite confident about my career plans but still had a few doubts or questions ____

   F. I wanted to confirm my career plans ____

2. Did you need assistance while working with the SIGI computer terminal?

   A. Only for initial instructions ____

   B. Yes, twice ____

(over)

C. Yes, three times ____

D. Yes, four times or more ____

E. No assistance needed ____

3. Did you have all the information you needed to use SIGI effectively?

A. Yes ____

B. No, but the needed information was supplied by the counselor ____

C. No, but the needed information was easily obtained ____

D. No, but I got along all right without it ____

E. Because I didn't have the information I needed, the computer was not very helpful to me ____

4. Tentative occupational choice prior to use of SIGI _____

5. When you first came to SIGI, how confident of your occupational plans were you?

A. I came to SIGI not knowing what I wanted to do ____

B. I came to SIGI having several alternatives ____

C. I came to SIGI with questions or doubts about my occupational plans ____

D. I came to SIGI with confidence in my occupational plans ____

6. Tentative occupational choice now _____

7. Now, how confident of your plans are you? (Check as many as appropriate)

A. I am still uncertain ____

B. I have a much better idea now ____

C. SIGI helped me to choose one ____

D. SIGI helped confirm the choice I had already made ____

E. SIGI suggested other things which I am considering ____

8. How was SIGI helpful? (Check all that apply)

   A. Assisted me to think about my interests ____

   B. Assisted me to think about my abilities ____

   C. Assisted me to think about my values ____

   D. Assisted me in making career plans ____

   E. Assisted me to obtain more information about occupations ____

   F. Assisted me to obtain more information about college programs ____

   G. Assisted me in teaching me how to make career decisions ____

   H. It was not helpful ____

9. What was the most useful section of SIGI for you? Values ____ Locate ____

   Compare ____ Prediction ____ Planning ____ Strategy ____

10. Is there anything SIGI didn't cover that you would like it to cover?

    What _____

11. Did you have any trouble locating an occupation in which you are interested? Yes ____ No ____

12. Were there any occupations missing from SIGI in which you were interested? Yes ____ No ____ If Yes, list occupations

    _____ _____ _____

13. Is there any area you would like to have covered more fully?
    Yes ____ No ____ If Yes, it was _____

14. Circle the grade that you would give SIGI on each of the following:
    (A - Very high, F - Very low)

    A. General interest . . . . . A B C D E F

    B. Clarity of directions . . . . . A B C D E F

(over)

C. Helping you to become more aware of your values A B C D E F

D. Helping you to understand that values are related to career decisions . . . . . .A B C D E F

E. Helping you to find out which occupations fit your values . . . . . .A B C D E F

F. Helping you to obtain information about occupations . . . . . .A B C D E F

G. Helping you to plan a program that is appropriate for an occupation you are considering . . .A B C D E F

H. Helping you to learn how to make career decisions A B C D E F

15. Did SIGI help you to make better use of your counselor's time (Check as appropriate)

A. After using SIGI, I felt the time I spent with the counselor was of greater value than if I had not used SIGI ____

B. After using SIGI, I felt there was no need to see a counselor ____

C. After using SIGI, I felt the need to see a counselor more than ever ____

16. In summary, was SIGI helpful to you?

A. Very much so. I was completely satisfied ____

B. Yes, it was very helpful ____

C. It was not very helpful ____

D. I would have received more help if I had just talked to a counselor without using SIGI ____

E. No, SIGI was a waste of time ____

17. Do you expect to return to Pasadena City College next semester?

Yes ____ No ____

18. Would you like to use SIGI again?

Yes ____ No ____

PASADENA CITY COLLEGE

OCCUPATIONAL INFORMATION QUESTIONNAIRE (OIQ)

Name _____ Date _____

Social Security Number ___ ___ ___ ___ ___ ___ ___ ___ ___

Write brief answers or complete the following statements about the occupation you are most seriously considering. If you do not have enough information to answer the question, write "can't say" under the question.

Name of occupation _____

1. The work activities in this occupation include: _____

_____

_____

2. In this occupation, contact with other people (such as clients or co-workers is (check one):

   High ____ Medium ____ Low ____ Can't Say ____

   Contact with others consists mainly of: _____

3. To enter, you need at least (check one):

   Associate Degree ____ Bachelors ____ Masters ____ Ph.D. ____

   Can't Say ____ Other ____

4. Some of the required college courses are _____

_____

5. A worker in this occupation should have the following personal traits:

_____

_____

_____

(over)

6. Are there licensing requirements or state examinations?

   Yes ____ No ____ Can't Say ____ If yes, what _____

_____

7. Typical beginning salary is $ _____

   The average salary is $ _____

8. Opportunities for helping others are (check one):

   Great ____ Medium ____ Small ____ Can't Say ____

   In what ways can a worker in this occupation help other people? ____

_____

_____

9. Opportunities for leadership are (check one):

   Great ____ Medium ____ Small ____ Can't Say ____

   In what ways does a person in this occupation direct others? _____

_____

_____

   For how many people is that person usually responsible? _____

10. In what interest field(s) is this occupation?

    Scientific ____ Personal Contact ____ Business ____ Verbal, Writing ____ Technological (things, machines, mechanical skills) ____ The Arts (painting, sculpture, music) ____ Can't Say ____

11. In the eyes of the public, the prestige level of this occupation is (check one):

    High ____ Medium ____ Low ____ Can't Say ____

12. The physical surroundings on the job usually are (check one):

Office ____ Outdoors ____ Laboratory ____ Store ____

Other ____

If other, describe: _____

13. Typical working hours are: _____

How often would you be expected to work overtime?

Rarely ____ Sometimes ____ Frequently ____ Can't Say ____

Would you work the same hours every day?

Yes ____ No ____ Can't Say ____

14. How much freedom from supervision would a person in this occupation have?

A small amount ____ A moderate amount ____ A great amount ____

Can't Say ____

15. How much variety does this occupation provide in people, places, and activities?

Variety Level

	High	Medium	Low	Can't Say
People	____	____	____	____
Places	____	____	____	____
Activities	____	____	____	____

16. Fringe benefits (extra benefits beyond salary) to employees in this field consist of:

_____

_____

_____

(over)

17. For the future (5-10 years), the employment outlook in this occupation is (check one):

Good ___ Fair ___ Poor ___ Can't Say ___

Why? _____

18. Name some businesses, industries, etc., which employ workers in this occupation.

_____

_____

19. The job security is (check one):

High ___ Medium ___ Low ___ Can't Say ___

Is there anything about the occupation that might affect job security?

Yes ___ No ___ Can't Say ___ If yes, describe: _____

_____

_____

20. What are chances for advancement in this occupation?

High ___ Medium ___ Low ___ Can't Say ___

What skills, experiences, etc., are required to advance in this occupation?

_____

_____

PASADENA CITY COLLEGE

COUNSELOR QUESTIONNAIRE (CQ)

(To Be Completed After Last Followup Conference)

Student's Name _____ Date _____

Current choice of educational major _____

Current choice of vocation _____

1. Total time spent in followup conferences _____ minutes.

2. Rate the probability of the student succeeding in his chosen educational program.

   Little probability ____ Reasonable probability ____

   High probability ____

3. Rate the probability of the student attaining his chosen vocational goal.

   Little probability ____ Reasonable probability ____

   High probability ____

4. Only for those students who have changed their career goal since beginning the program. Current career objective as contrasted with previous career goal is:

   More realistic ____ Less realistic ____ No difference ____

Grade the student in the following areas: (A - Highest grade, F - Lowest grade)

5. Degree of student's knowledge of how to make career decisions . . . . . A B C D E F

6. Degree of student's information about specific occupations . . . . . A B C D E F

7. Degree of student's knowledge of course requirements for specific occupations . . . . . A B C D E F

(over)

8. Degree of student's knowledge of what he wanted to obtain from the counseling conferences . . . A B C D E F

9. Overall value of the counseling conferences . . A B C D E F

10. Comments:

Completed by _____
Counselor

PASADENA CITY COLLEGE

STUDENT QUESTIONNAIRE (SQ I)

SIGI PROGRAM

Name _____ Date _____

(1) What are your current educational plans? _____

_____

(2) What are your current vocational plans? _____

_____

(3) How satisfied are you with your current educational plans?

Very satisfied ____ Satisfied ____ Not satisfied ____

(4) How confident are you of succeeding in current educational plans?

Very confident ____ Confident ____ Not confident ____

(5) How satisfied are you with your current vocational plans?

Very satisfied ____ Satisfied ____ Not satisfied ____

(6) How confident are you of succeeding in current vocational plans?

Very confident ____ Confident ____ Not confident ____

(7) What is your current need for help with educational planning?

(A) Need considerable help ____
(B) Could use additional help ____
(C) Plans are pretty clear and do not need additional help at this time ____

(8) What is your current need for help with vocational planning?

(A) Need considerable help ____
(B) Could use additional help ____
(C) Plans are pretty clear and do not need additional help at this time ____

(over)

(9) Indicate the extent of your knowledge of college course requirements. Ex. Courses required for specific majors, course prerequisite requirements, etc.

____ Very limited knowledge
____ Some knowledge
____ Adequate knowledge

(10) Indicate the extent of your knowledge of entry level requirements. Ex. Examinations, credentialing or licensing, fees, training programs, memberships, apprenticeships, etc., for the vocation you are considering.

____ Very limited knowledge
____ Some knowledge
____ Adequate knowledge

(11) All students have had individual followup conferences with their counselors. At these conferences your SIGI materials were reviewed and career plans discussed. How valuable were these conferences to you?

____ Little value
____ Valuable
____ Much value

(12) Before you began the SIGI program, how would you have rated yourself in terms of how well you knew what college program and vocation you wanted?

Before beginning the SIGI program ---

____ I had almost no idea of what college program and vocation I wanted
____ I had some idea of what college program and vocation I wanted but wasn't too sure about these
____ I had a fairly definite idea of what college program and vocation I wanted
____ I knew for sure what college program and vocation I wanted

Now, after having completed the SIGI program, how would you rate yourself in terms of how well you know what college program and vocation you want?

After completing the SIGI program ---

____ I have almost no idea of what college program and vocation I want

____ I have some idea of what college program and vocation I want but am not too sure about these
____ I have a fairly definite idea of what college program and vocation I want
____ I know for sure what college program and vocation I want

(13) Before you began the SIGI program, how would you have rated yourself in your knowledge of factors important in making career decisions?

Before beginning the SIGI program ---

____ I had almost no idea of the factors which are important in making career decisions
____ I had some idea of the factors which are important in making career decisions but wasn't too sure about these
____ I had a fairly definite idea of the factors which are important in making career decisions
____ I definitely knew the factors which are important in making career decisions

Now, after having completed the SIGI program, how would you rate yourself in terms of how well you know the factors important in making career decisions?

____ I have almost no idea of the factors which are important in making career decisions
____ I have some idea of the factors which are important in making career decisions
____ I have a fairly definite idea of the factors which are important in making career decisions
____ I definitely know the factors which are important in making career decisions

(14) Before you began the SIGI program, how would you have rated yourself in terms of how much you know about the college program and vocation of your choice?

Before beginning the SIGI program ---

____ I knew very little about the college program and vocation I was considering
____ I knew a little about the college program and vocation I was considering
____ I knew quite a bit about the college program and vocation I was considering
____ I was very knowledgeable about the college program and vocation I was considering

(over)

Now, after having completed the SIGI program, how would you rate yourself in terms of how much you know about the college program and vocation of your choice?

After completing the SIGI program ---

____ I know very little about the college program and vocation I am considering
____ I know a little about the college program and vocation I am considering
____ I know quite a bit about the college program and vocation I am considering
____ I am very knowledgeable about the college program and vocation I am considering

PASADENA CITY COLLEGE

STUDENT QUESTIONNAIRE (SQ II)

VOCATIONAL EXPLORATION PROGRAM

Name _____ Date _____

(1) What are your current educational plans? _____

_____

(2) What are your current vocational plans? _____

_____

(3) How satisfied are you with your current educational plans?

Very satisfied ____ Satisfied ____ Not satisfied ____

(4) How confident are you of succeeding in current educational plans?

Very confident ____ Confident ____ Not confident ____

(5) How satisfied are you with your current vocational plans?

Very satisfied ____ Satisfied ____ Not satisfied ____

(6) How confident are you of succeeding in current vocational plans?

Very confident ____ Confident____ Not confident ____

(7) What is your current need for help with educational planning?

(A) Need considerable help ____
(B) Could use additional help ____
(C) Plans are pretty clear and do not need additional help at this time ____

(8) What is your current need for help with vocational planning?

(A) Need considerable help ____
(B) Could use additional help ____
(C) Plans are pretty clear and do not need additional help at this time ____

(over)

(9) Indicate the extent of your knowledge of college course requirements. Ex. Courses required for specific majors, course prerequisite requirements, etc.

____ Very limited knowledge
____ Some knowledge
____ Adequate knowledge

(10) Indicate the extent of your knowledge of entry level requirements. Ex: Examinations, credentialing or licensing, fees, training programs, memberships, apprenticeships, etc., for the vocation you are considering.

____ Very limited knowledge
____ Some knowledge
____ Adequate knowledge

(11) All students have had individual followup conferences with their counselors. At these conferences your vocational testing materials were reviewed and career plans discussed. How valuable were these conferences to you?

____ Little value
____ Valuable
____ Much value

(12) Before you began the Vocational Testing and Counseling program, how would you have rated yourself in terms of how well you knew what college program and vocation you wanted?

Before beginning the Vocational Testing and Counseling program ---

____ I had almost no idea of what college program and vocation I wanted
____ I had some idea of what college program and vocation I wanted
____ I had a fairly definite idea of what college program and vocation I wanted
____ I knew for sure what college program and vocation I wanted

Now, after having completed the Vocational Testing and Counseling program, how would you rate yourself in terms of how well you know what college program and vocation you want?

After completing the Vocational Testing and Counseling program ---

____ I have almost no idea of what college program and vocation I want

____ I have some idea of what college program and vocation I want but am not too sure about these
____ I have a fairly definite idea of what college program and vocation I want
____ I know for sure what college program and vocation I want

(13) Before you began the Vocational Testing and Counseling program, how would you have rated yourself in your knowledge of factors important in making career decisions?

Before beginning the Vocational Testing and Counseling program ---

____ I had almost no idea of the factors which are important in making career decisions
____ I had some idea of the factors which are important in making career decisions but wasn't too sure about these
____ I had a fairly definite idea of the factors which are important in making career decisions
____ I definitely knew the factors which are important in making career decisions

Now, after having completed the Vocational Testing and Counseling program, how would you rate yourself in terms of how well you know the factors important in making career decisions?

After completing the Vocational Testing and Counseling program ---

____ I have almost no idea of the factors which are important in making career decisions
____ I have some idea of the factors which are important in making career decisions
____ I have a fairly definite idea of the factors which are important in making career decisions
____ I definitely know the factors which are important in making career decisions

(14) Before you began the Vocational Testing and Counseling program, how would you have rated yourself in terms of how much you know about the college program and vocation of your choice?

Before beginning the Vocational Testing and Counseling program ---

____ I knew very little about the college program and vocation I was considering
____ I knew a little about the college program and vocation I was considering
____ I knew quite a bit about the college program and vocation I was considering
____ I was very knowledgeable about the college program and vocation I was considering

(over)

Now, after having completed the Vocational Testing and Counseling program, how would you rate yourself in terms of how much you know about college program and vocation of your choice?

After completing the Vocational Testing and Counseling program ---

____ I know very little about the college program and vocation I am considering
____ I know a little about the college program and vocation I am considering
____ I know quite a bit about the college program and vocation I am considering
____ I am very knowledgeable about the college program and vocation I am considering